



**AMENDMENT NO. 5 TO
CONSULTANT SERVICES AGREEMENT**

**Water System Upgrades Program
Project No. PW3-925-4631**

Council Date: August 14, 2025

THIS AMENDMENT NO. Five ("Amendment No. 5") to the professional services agreement dated October 24, 2023 (the "Agreement") is made by and between the City of Chandler, an Arizona municipal corporation, ("City") and **Hazen and Sawyer, P.C., a New York professional corporation** ("Consultant"), on this ____ day of _____, 2025 ("Effective Date" by Clerk). (City and Consultant may individually be referred to as "Party" and collectively referred to as "Parties").

RECITALS

- A. The Parties entered into the Agreement for: **Consultant Services** ("Services") for the **Water System Upgrades Program** project.
- B. The Parties have determined that it is necessary and desirable for the Consultant to perform additional services for the City under the terms and conditions set forth in this Amendment No. 5 and the Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the premises and mutual promises contained in the Agreement and this Amendment No. 5, the Parties agree to amend and modify the Agreement as follows.

SECTION I - CONSULTANT'S SERVICES

The Consultant's Services are modified as described in the Exhibit "A" attached to and made part of this amendment by reference.

SECTION II – PERIOD OF SERVICE

The Period of Service is unchanged.

SECTION III – PAYMENT OF COMPENSATION AND FEES

The Fees are increased by \$422,420 and will be payable in accordance with Exhibit B attached to and made part of this amendment by reference, for a revised total not to exceed \$13,051,635.

SECTION IV – CONFLICT AMONG DOCUMENTS

The Agreement, this amendment, and any previous amendments constitute the complete agreement between the Parties concerning the subject matter of the Agreement and replace any prior oral or written communications between the Parties. If a conflict or ambiguity arises between the Agreement and this amendment, the instrument in the following order prevails and controls: (1) this amendment; (2) any previous Amendments from most recent to oldest; and (3) the Agreement.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment No. 5 to be duly executed. Each Party warrants and represents that its respective signatories whose signatures appear below have been and are on the date of signature duly authorized to execute this Amendment No. 5.

“CITY” CITY OF CHANDLER

MAYOR

RECOMMENDED BY:

Jeremy Abbott
Public Works and Utilities Assistant
Director

APPROVED AS TO FORM:

City Attorney 

ATTEST:

City Clerk Seal

**“CONSULTANT”
Hazen and Sawyer, P.C.**

Curtis Courter _____ July 18, 2025
Signature Date

Curtis Courter
Print Name

Vice President
Title

ccourter@hazenandsawyer.com
Signer Email Address

Amendment No. 5 (cont.)
Project No. PW3-925-4631

These changes result in the following adjustments of Agreement amount and/or time:

Amendment authorized by Owner name: Jeremy Abbott		Date: 7/7/2025
Consultant email: ccourter@hazenandsawyer.com		
Original Agreement amount:	\$695,720	
Previous Amendment(s) total:	\$335,150	
Last Agreement amount approved by Council:	\$845,400	
This Amendment:	\$11,598,345	
This Amendment + previous Amendment(s) not approved by Council total:	\$11,783,815	
Revised Agreement total:	\$12,629,215	
Council Approval Required (yes indicates approval required)	Yes	No
Amendment(s) total over \$100,000:	☒	☐
Amendment(s) total causes Agreement to exceed \$100,000:	☒	☐
Agreement Time		
Agreement time prior to this Amendment (including previous amendments):	<u>964</u> Calendar Days	
Net change resulting from this Amendment:	<u>0</u> Calendar Days	
Revised Agreement time (including this Amendment):	<u>964</u> Calendar Days	
Council Approval (if applicable)		
Council Approval Date: <u>2/22/2024</u> Item No. 27		

cc: Project Manager, Consultant, Owner, File

EXHIBIT A SCOPE OF WORK

Project Description

Hazen and Sawyer (Consultant) is currently serving as Program Manager for the Water System Program PW3-925-4631 (Program) for the City of Chandler (City). As part of the Program, the City requested Consultant to develop a scope and fee to develop a roadmap for the Water Main Replacement Program, which consists of distribution system pipeline replacements coming up over the next ~30 years.

The objective of the roadmap is to develop a list of projects based on the risk factors and prioritize the sequencing of implementation while maximizing collaboration and coordination with other planned City projects. Recommendations for project grouping, project delivery methods, and planning level schedules and cost estimates will also be provided. The following tasks will be performed as part of the project:

Task 1: Data Request and Review

Task 2: Update Desktop Level Risk Analysis for Water Distribution System

Task 3: Stakeholder Coordination

Task 4: Project Prioritization

Task 5: Water Main Replacement Program Roadmap

1. Data Request and Review

The objective of this task is to establish baseline data and information on conditions and operations of the City's water distribution system. Once data is received, Consultant will review the data, documents, and models to identify any data gaps. For any data gaps identified, Consultant will initiate additional data request(s), field verifications, or field data collection.

1.1 Data Request

Consultant will request and review technical and operations data at the beginning of the project. Information anticipated to be requested includes:

- Updated GIS
 - Water mains – size, material, age
 - Water meters – user type, detailed customer classification
 - Pipe break records
 - Land use related GIS files
 - All utilities and streets
- GIS geodatabase containing results from previous water main risk analysis
- Customer billing data
- City's latest water model

- City's 2018 Water, Wastewater, and Reclaimed Water Master Plan
- Pavement quality index for all roads in GIS format
- List of upcoming street projects
- List of upcoming ADA projects
- Water Distribution Operations staff group interviews
- Council approved CIP
- As-builts for water main replacement projects that have been completed since the previous master plan

1.2 GIS Data Gap Analysis

Consultant will review the GIS data provided by the City and identify any data gaps that must be addressed to update the risk analysis. Consultant will work with the City to address the gaps and ensure a fairly complete data set is available to update the risk analysis.

Task 1 Assumptions:

- Data will be available within 2 weeks of NTP
- Operations interviews will be held in-person with a group of staff over two (2) sessions, each no more than two (2) hours in duration
- The City's existing GIS data is fairly complete, meaning the linear assets contain most of the attribute data required to complete the updates to the risk analysis. Professional judgment will be used to make assumptions for unavailable data.

Task 1 Deliverables:

- Data request
- Key findings, gaps in information and recommendations to close gap

2. Update Desktop Level Risk Analysis for Water Distribution System

The objective of this task will be to update the risk scores for linear assets in the water distribution system that were established in the City's previous desktop level risk assessment. This risk analysis was prepared during the City's last water master plan update in 2018. The risk-based approach was based on determining the consequence of failure (COF) and the likelihood of failure (LOF) for each linear asset to develop risk scores. Consultant will build upon the existing framework and update risk scores for water mains that have been replaced since the previous master plan.

2.1 Calculate Updated Risk Scores

Consultant will utilize a GIS-based asset management tool to update LOF and COF scores based on the City's latest GIS and existing framework from the previous risk analysis. Scores will be updated for water mains that have been replaced since the previous master plan.

Updates to the LOF and COF scores will be made within the City's water main risk analysis GIS geodatabase and will be used to calculate new overall risk scores for the linear assets. The updated overall risk scores will also be reflected within the water main risk analysis GIS geodatabase.

2.2 Analyze Updated Risk Scores and Results

Graphical and spatial representation of the updated results will be developed to better understand how risk scores within the distribution system have changed since the previous master plan. The results will be presented to the City during a workshop and further used during project prioritization.

2.3 Workshop

Consultant will host one (1) workshop with staff from the City's Public Works and Utilities Department to discuss the results from the updated risk analysis and start discussions on potential project areas.

Task 2 Assumptions

- Consultant will host one (1) workshop, which shall be held in-person and last no more than two (2) hours
- Consultant will use the same COF and LOF risk matrices prepared for the previous master plan. Updates to the categories, weights and criteria are excluded.
- All updates will be made within the City's existing water main risk analysis GIS geodatabase. A new GIS geodatabase will not be created.
- City's hydraulic model will not be updated or calibrated as part of this project.
- Updates and/or data cleanup to the City's GIS files are not included.

Task 2 Deliverables

- Workshop PowerPoint slides and meeting minutes in PDF format
- Updated water main risk analysis GIS geodatabase
- Maps showing risk analysis results for pipes in the water distribution system

3. Stakeholder Coordination

This task includes coordination with other City Departments/Divisions to better understand upcoming projects and/or priorities that should be accounted for in the Water Main Replacement Program.

3.1 Workshops

Consultant will coordinate with the appropriate staff members from each department to schedule a virtual workshop. In addition, Consultant will prepare a PowerPoint presentation with some background information on the upcoming program, a summary of preliminary results from the updated risk analysis, and a list of questions to initiate discussions with City staff members. The list of departments that Consultant will meet with will be finalized based on feedback from Public Works and Utilities Department staff, and may include the following:

- Development Services
 - Planning
 - Telecommunications and Utility Franchise (TUF)
- Cultural Development
 - Downtown Redevelopment
- Neighborhood Resources
- Communications and Public Affairs (CAPA)
- Public Works and Utilities
 - Streets Maintenance
 - CIP
 - Real Estate
 - Wastewater Collections
 - Meter Services
 - Water Quality

Finally, Consultant will host one (1) virtual workshop with the City's municipal leadership team to establish the guiding principles that will be used during project prioritization.

Task 3 Assumptions:

- Consultant will host up to two (2) workshops with each department, which shall be held virtually and last no more than one (1) hour in duration each. The first workshop will be used to introduce the program and obtain input. The second workshop will be used to present the proposed program roadmap. To efficiently implement the workshops, one workshop may be held for multiple departments/divisions. The table below summarizes the assumed number of workshops based on this approach.

Department	Division	Workshop 1	Workshop 2
Development Services	Planning	X	X
	Telecommunications and Utility Franchise (TUF)		
Public Works and Utilities	CIP		
	Real Estate	X	X
	Streets Maintenance		
	Wastewater Collections	X	X
	Meter Services	X	X
	Water Quality		
Cultural Development	Downtown Redevelopment	X	X
Neighborhood Resources	-		
Communications and Public Affairs	-		
Total Workshops =		5	5

- Consultant will host one (1) workshop with the City's municipal leadership team, which shall be held virtually and last no more than one (1) hour in duration each. The first workshop will be used to introduce the program and obtain input.
- Consultant will document the stakeholder inputs pertaining to potential water line projects.

Task 3 Deliverables:

- Workshop PowerPoint slides and meeting minutes in PDF format

4. Project Prioritization

The objective of this task is to identify and prioritize project areas in the water distribution system that require assessment, repair, and/or replacement. Consultant will utilize the risk analysis results, feedback from stakeholder coordination and a desktop level analysis of water lines in utility service areas to identify the project areas.

4.1 Desktop Level Analysis of Water Lines in Utility Service Areas

Consultant will identify the City's water lines located in or in conflict with service areas and easements belonging to other utilities and stakeholders that may require additional coordination and permitting if they are repaired or replaced. Consultant will overlay the City's water line GIS data on top of parcel GIS linework obtained from the Maricopa County's Assessor website and any available GIS data provided by the utilities and stakeholder to identify conflicts. In addition, Consultant will, to the extent possible, attempt to identify existing water lines located within alleys that may require replacement to improve access to these linear assets during operations and maintenance.

Consultant will coordinate with the utilities and stakeholders to obtain any available GIS data or maps that depict their service areas or easements. If PDF maps are provided, the maps will be georeferenced into ArcGIS Pro. It is expected that the following utilities and stakeholders may have utility service areas and/or easements that conflict with the City's water lines:

- ADOT
- APS
- MCDOT
- MCESD
- RWCD
- SRP Irrigation and Power
- UPRR

It should be noted that although MCESD is not a utility provider, it is a stakeholder that will require permitting during repairs or replacements. High level discussions with MCESD management personnel are expected to determine how to expedite an Approval of Construction (AOC) to bring a recently rehabilitated or constructed water main online quickly.

Consultant shall provide the findings to the City and discuss in meetings as needed. The findings will also be incorporated into the identification and prioritization of project areas for the program.

4.2 Develop List of Project Areas

Consultant will utilize the risk analysis results, feedback from stakeholder coordination, and desktop level analysis of water lines in utility service areas to identify and prioritize the project areas that will be part of the program's roadmap. Project sheets will be created for the projects required within the next 5 years and will include a summary scope of work and a planning level cost estimate for each project area. Projects beyond the 5-year mark will be listed by year, but project sheets will not be developed.

4.3 Planning Level Cost Estimate

AACE Class 5 cost estimates will be provided for each identified project area, which are common for this level of planning. In providing opinions of cost for each project, Consultant has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, Consultant makes no warranty that the City's actual project costs, financial aspects, economic feasibility, or schedules will not vary from the Consultant's opinions, analyses, projections, or estimates.

Task 4 Assumptions

- Consultant will conduct one (1) meeting to discuss the list of projects, which shall be held virtually and last no more than two (2) hours
- Cost estimates will be AACE Level 5
- Detailed utility coordination or conflict is not included

Task 4 Deliverables

- Project sheets listed in electronic PDF format
- Cost models in Excel format along with Basis of Estimate
- An exhibit depicting project locations in the distribution system in electronic PDF format
- GIS shapefiles for the proposed water main replacements. The shape files will include project name, description, rationale, target start fiscal year, and cost.

5. Water Main Replacement Program Roadmap

This task includes developing a Program Roadmap which summarizes the findings from Tasks 2, 3 and 4 and provides the path to perform upgrades in the City's water distribution system over the next 10 years.

5.1 Draft Program Roadmap

Consultant will prepare a Draft Program Roadmap that will include the following:

- Summary of findings from Tasks 2, 3, and 4
- Summary of the project areas identified in Task 4 and their justification/driver
- Summary of the cost estimates established for each of the project areas in Task 4
- Preferred procurement method for design and construction for each of the project areas
- Discussion of funding splits with stakeholders for the project areas
- Recommended schedule for implementation of the project areas

5.2 Final Program Roadmap

Consultant will develop a Final Program Roadmap that will incorporate the City's comments on the Draft Program Roadmap.

5.3 Workshop

Consultant will host one (1) workshop with the staff from the City's Public Works and Utilities Department to review their comments on the Draft Program Roadmap.

Task 5 Assumptions

- Consultant will host one (1) workshop, which shall be held in-person and last no more than two (2) hours
- City will provide one (1) round of consolidated comments on the Draft Program Roadmap, which will be incorporated and/or addressed for the Final Program Roadmap.
- The list of project areas may be subject to change due to the City's next update to their water master plan based on the latest General Plan updates. Such changes will be implemented into the Program at the City's discretion through a future contract or scope amendment.

- The list of project areas may be subject to change based on inputs from City's planned valve exercise program. Such changes will be implemented into the Program at the City's discretion through a future contract or scope amendment.
- Consultant will work with the City to align the proposed projects with their currently approved 10-year CIP budget. If this is not possible, Consultant will suggest modifications to the CIP budget.

Task 5 Deliverables

- Workshop PowerPoint slides and meeting minutes in PDF format
- Draft Program Roadmap in electronic PDF format
- Final Program Roadmap in electronic PDF format

6. Allowances

6.1 Potholing Allowance

This allowance will be used to perform potholing to verify existing pipe materials and support the identification of areas in need of repair or replacement. The potholing results will not be used for design purposes. Potholing activities will be performed by a City approved potholing subconsultant. The allowance will only be utilized with the City's prior written authorization.

6.2 Workshops with City Manager(s) and Council Allowance

This allowance will be used for Consultant to host workshops with the City Manager(s) and Council. Up to two (2) workshops shall be held virtually and last no more than one (1) hour in duration each. The first workshop will be used to introduce the program and obtain input. The second workshop will be used to present the proposed program roadmap. The allowance will only be utilized with the City's prior written authorization.

7. Other Direct Costs (ODC)

This task is for expenses related to the project, such as travel and shipping.

Appendix A: Schedule

Description	Month											
	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26			
Data Request and Review												
Data Request												
GIS Data Gap Analysis												
Update Desktop Level Risk Analysis												
Calculate Updated Risk Scores												
Analyze Updated Risk Scores and Results												
Workshop (1)												
Stakeholder Coordination												
Workshops (22), coordination and project identification												
Project Prioritization												
Desktop Level Analysis of Water Lines in Utility Service Areas												
Identify Project Areas												
Meet with City to Discuss Project Areas												
Planning Level Cost Estimates												
Program Roadmap												
Draft Program Roadmap												
City Review of Program Roadmap												
Final Program Roadmap												
Workshop (1)												
Potholing												
Legend:		Duration			Milestone			Deliverable				

EXHIBIT B
FEE SCHEDULE

Task	Name	Curt Coomer Project Director	Brenda Dhanasekaran Program Manager	Seth Morales Deputy Program Manager	Sean Fitzgerald Subject Matter Expert	Meg Roberts Distribution System Lead	Chris Carter Construction/ Cost Estimates	Ken Comacho/Conny Caulkins Senior GIS Analyst	Zoe Sharp/Elfin Wiemers/Ethan Pood/Olivia August Concepcion/Lead	Varies Assistant Engineer (AE)	Varies Admin or Intern	Subtotal Hours	Fee
	Hourly Rates	\$ 265	\$ 265	\$ 200	\$ 265	\$ 265	\$ 220	\$ 180	\$ 220	\$ 150	\$ 80		
Task	Description												
LEVEL OF EFFORT (HOURS)													
Task 1: Data Request and Review													
1.1	Data Request			8				24		40		128	\$ 18,960
1.2	GIS Data Analysis			16								120	\$ 2,600
Task 2: Update Desktop Level Risk Analysis													
2.1	Calculate Updated Risk Scores		4	4	4	4	4	40		40		96	\$ 12,520
2.2	Analyze Updated Risk Scores and Results		4	12	8	12	12	40		40		120	\$ 22,800
2.3	Workshop [1]		2		4	4	4	4		12		30	\$ 7,380
Task 3: Stakeholder Coordination													
3.1	Workshops (11), coordination and project identification		40	140	24	24	24		60	120		448	\$ 85,520
Task 4: Project Prioritization													
4.1	Desktop Level Analysis of Water Lines in Utility Service Areas		4	80	36	36	80	40	80	120		436	\$ 85,280
4.2	Identify Project Areas		4	24	36	36	24	24	16	80		204	\$ 32,640
4.3	Determine Level Cost Estimates		4	40			120			120		284	\$ 53,600
Task 5: Program Roadmap													
5.1	Draft Program Roadmap		8	60	32		12	24	16	80		248	\$ 45,140
5.2	Final Program Roadmap		8		32			8		20		50	\$ 9,140
5.3	Workshop [1]		4	8	4	4	4			8		28	\$ 5,120
Task 6: Allowances													
6.1	Permitted Allowances												\$ 25,760
6.2	Workshop with City Manager/14 and Council		4	16						8		20	\$ 20,000
												12	\$ 5,360
Task 7: Other Direct Costs													
												\$ 5,000	\$ 5,000
												TOTAL FEE	\$ 422,420